Test Report

Testing institute	:	Product Technology Service (Ningbo) Co., Ltd. 6&7F, 59#, Huayu Road, Yinzhou District, Ningbo 315192 P.R. China
Applicant	:	[redacted]
Product name	:	Magnetic building block toy
Model/type	:	/
Sample Description	:	/
Material	:	/
Sample receive date	:	Aug.07,2017
Completes date	:	Aug.18,2017
Testing location	:	Product Technology Service (Ningbo) Co., Ltd.
Test specification(s)	:	1. ASTM F963-16 Standard Consumer Safety Specification for Toy Safety --Mechanical and Physical Properties Excluding Clause 7.1 2. ASTM F963-16 Standard Consumer Safety Specification for Toy Safety --4.2 Flammability 3.ASTM F963-16 Standard Consumer Safety Specification for Toy Safety ------ Heavy Metal 4.As specified by client, to determine lead content in paint/similar surface coating material, lead content in accessible substrate materials and phthalates content in the selected parts of the submitted sample(s) with reference to US Public Law 110-314(CPSIA: Consumer Product Safety Improvement Act of 2008) (H.R.4040+H.R.2715).

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Meng Wei
Authorizer :
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Product Technology Service (Ningbo) Co., Ltd.

Ningbo, Aug.18,2017

The test results exclusively refer to the samples examined. This report shall not be reproduced except in full without written approval and does not authorize the use of Product Technology Service (Ningbo) Co., Ltd. label. The report is invalid without signature and seal of Product Technology Service (Ningbo) Co., Ltd.

Product name

No.	Name	Part No.	Part Name
1	Magnetic building blocks	1-1	Purple translucent plastic
		1-2	Yellow-green translucent plastic
		1-3	Yellow translucent plastic
		1-4	Red translucent plastic
		1-5	Pink translucent plastic
		1-6	Blue translucent plastic
		1-7	Dark blue translucent plastic
		1-8	Orange translucent plastic
		1-9	Green translucent plastic
		1-10	White plastic
		1-11	Black plastic
		1-12	Black wheels
		1-13	Black ink on white plastic
		1-14	Metal sheets
		1-15	Metal shaft

1. ASTM F963-16: Mechanical and Physical Properties

Test specification	:	ASTM F963-16 Standard Consumer Safety Specification for Toy Safety Excluding Clause 7.1
Re-test times	:	Once
Test item	:	See below
Requirement	:	See below
Labeled age grading	:	3+ years
Applicant's specified age group for testing	:	3+ years
Age grading for test	:	Over 3 years

Test Results

Clause	Assessment
4. Safety Requirements	
4.1 Material Quality	Pass
4.7 Accessible Edges	Pass
4.8 Projections	Pass
4.9 Accessible Points	Pass
4.17 Wheels, Tires and Axles	Pass
4.38 Magnets	Pass
5. Labeling Requirements	
5.2 Age Grading Labeling	Pass
7. Producer's Markings	
7.1 General	See Remark 1

Remark :

1: The attention of the applicant was drawn to the need for the final product or its packaging must be marked with the name and address of the producer or distributor as specified in section 7.1 of U.S. ASTM F963-16.

N.B. : Only applicable clauses were shown.

2. 4.2 Flammability

Test method	:	ASTM F963-16 Standard Consumer Safety Specification for Toy Safety 4.2 Flammability
Test item	:	See below
Requirement	:	See below

Test Results

Clause	Assessment
4.2 Flammability	Pass
- A5 Flammability Testing Procedure for Solids and Soft Toys	

Remarks:

The result of burn rate: 0.04 in./s

Note:

The burn rate of all samples should be less than 0.1 in./s

(all styles of) the toy sample (and its accessories) was/were tested, and the result only showed the failed/most severe burn rate.

Remark:

Main test instruments used for this method:

Instrument	Internal No.
Nail-support Flammability tester	TNC15

3. ASTM F963-16 Standard Consumer Safety Specification for Toy Safety ----- Heavy Metal

Test method : ASTM International Standard ASTM F963-16, Section 8.3.2 to 8.3.5 (excluding 8.3.5.5(3))

Limit : ASTM F963-16- Heavy Elements – Soluble Migrated Elements Content in Surface Coatings and Substrates Other Than Modeling Clay (Clause 4.3.5.1(2) and 4.3.5.2(2)(b))

NO.	Testing item Soluble elements	Sb	As	Ba	Cd	Cr	Pb	Hg	Se	Conclusion
	Limit [mg/kg]	60	25	1000	75	60	90	60	500	
	Detection Limit [mg/kg]	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
1-1&1-2& 1-3**	--	ND	ND	ND	ND	ND	ND	ND	ND	--
1-4&1-5& 1-6**	--	ND	ND	ND	ND	ND	ND	ND	ND	--
1-7&1-8& 1-9**	--	ND	ND	ND	ND	ND	ND	ND	ND	--
1-10&1-11&1-12**	--	ND	ND	ND	ND	ND	ND	ND	ND	--
1-13@	--	ND	ND	ND	ND	ND	ND	ND	ND	Pass
1-14& 1-15**	--	ND	ND	ND	ND	ND	ND	ND	ND	--

Remark:

ND = Not Detected (< Detection Limit)

* = The analytical results were adjusted by subtracting analytical correction factor

@= The test result was calculated as if 100 mg of test portion had been used and the sample weight of test portion is less than 100 mg

**According to client's requirement, tests are combination tests. The experimental results are the total result of mixed samples.

Main test instruments used for this method:

Instrument	Manufactory	Model / Type
ICP-OES	PerkinElmer	5300DV

4.1.Lead content in paint/similar surface coating material

Test method : CPSC-CH-E1003-09.1

Product name:1-13.Black ink on white plastic					
Parameter:	Unit	Detection Limit	Result	Limit	Conclusion
Lead (Pb)	mg/kg	10.0	ND	90	Pass

ND = Not Detected (< Detection Limit)

Main test instruments used for this method:

Instrument	Manufactory	Model / Type
ICP-OES	PerkinElmer	5300DV

4.2.Lead content in accessible substrate materials

Test method : CPSC-CH-E1001-08.3 Total Lead (Pb) in Metal Children's Products
CPSC-CH-E1002-08.3 Total Lead (Pb) in Non-Metal Children's Products

Test Product No.	Testing element	Pb	Conclusion
	Requirement [mg/kg]	100	
	Detection Limit [mg/kg]	10.0	
1-1&1-2&1-3*	--	ND	--
1-4&1-5&1-6*	--	ND	--
1-7&1-8&1-9*	--	ND	--
1-10&1-11&1-12*	--	ND	--
1-14&1-15*	--	ND	--

ND = Not Detected (< Detection Limit)
*According to client's requirement, tests are combination tests. The experimental results are the total result of mixed samples.

Main test instruments used for this method:

Instrument	Manufactory	Model / Type
ICP-OES	PerkinElmer	5300DV

4.3. Phthalates

Test method : CPSC-CH-C1001-09.3
Standard Operating Procedure for Determination of Phthalates

Following three phthalates intended for toys and childcare articles

Test Product No.	Detection Limit	Limit	1-1&1-2&1-3	1-4&1-5&1-6	1-7&1-8&1-9
Dibutyl phthalate (DBP)	0.005%	0.1%	ND	ND	ND
Butyl benzyl phthalate (BBP)	0.005%	0.1%	ND	ND	ND
Di-2-ethylhexyl phthalate (DEHP)	0.005%	0.1%	ND	ND	ND
Conclusion			--	--	--

Following three phthalates intended for toys that can be placed in the mouth and childcare articles

Test Product No.	Detection Limit	Limit	1-1&1-2&1-3	1-4&1-5&1-6	1-7&1-8&1-9
Di-*n*-octyl phthalate (DNOP)	0.005%	0.1%	ND	ND	ND
Di-*iso*-nonyl phthalate (DINP)	0.005%	0.1%	ND	ND	ND
Di-*iso*-decyl phthalate (DIDP)	0.005%	0.1%	ND	ND	ND
Conclusion			--	--	--

ND = Not Detected (< Detection Limit)
According to client's requirement, tests are combination tests. The experimental results are the total result of mixed samples.

Main test instruments used for this method:

Instrument	Manufactory	Model / Type
GC-MS	Agilent Technologies	GC (7890)-MS (5975C)

Phthalates

Test method : CPSC-CH-C1001-09.3
Standard Operating Procedure for Determination of Phthalates

Following three phthalates intended for toys and childcare articles

Test Product No.	Detection Limit	Limit	1-10&1-11&1-12*	1-13
Dibutyl phthalate (DBP)	0.005%	0.1%	ND	ND
Butyl benzyl phthalate (BBP)	0.005%	0.1%	ND	ND
Di-2-ethylhexyl phthalate (DEHP)	0.005%	0.1%	ND	ND
Conclusion			--	Pass

Following three phthalates intended for toys that can be placed in the mouth and childcare articles

Test Product No.	Detection Limit	Limit	1-10&1-11&1-12*	1-13
Di-*n*-octyl phthalate (DNOP)	0.005%	0.1%	ND	ND
Di-*iso*-nonyl phthalate (DINP)	0.005%	0.1%	ND	ND
Di-*iso*-decyl phthalate (DIDP)	0.005%	0.1%	ND	ND
Conclusion			--	Pass

ND = Not Detected (< Detection Limit)
*According to client's requirement, tests are combination tests. The experimental results are the total result of mixed samples.

Main test instruments used for this method:

Instrument	Manufactory	Model / Type
GC-MS	Agilent Technologies	GC (7890)-MS (5975C)

Sample photo(s), see annex 1

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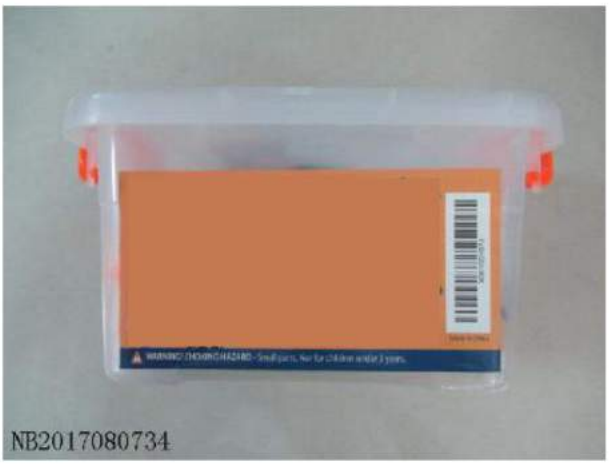
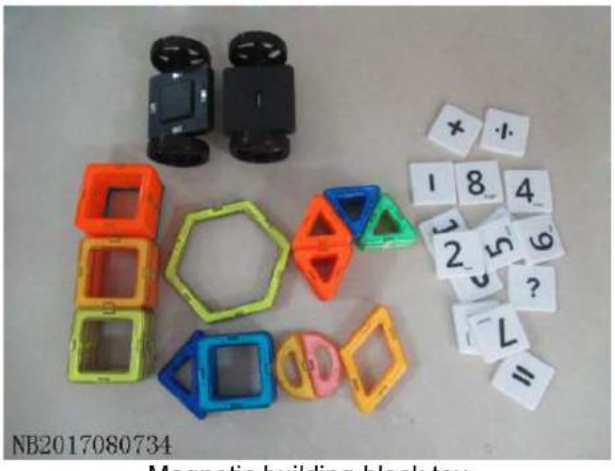
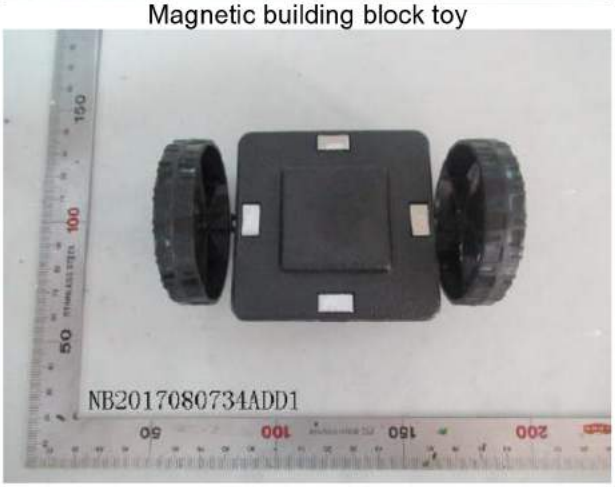
ANNEX 1
Sample photo(s), Consists of 2 pages

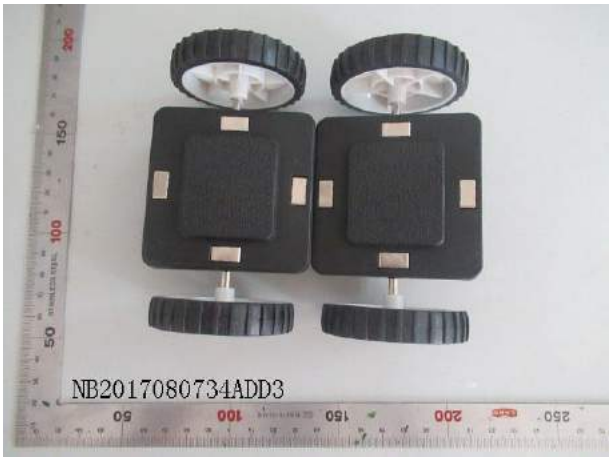




Magnetic building block toy



Just test for ASTM F963-16: Mechanical and Physical Properties



1-14. Metal sheets&1-15. Metal shaft(Just for ASTM F963-16 -- Heavy Metal test)